

CLAIM AMENDMENTS

1. (Currently Amended) A dental implant comprising:
 - a) a bottommost implant tip located at an apex;
 - b) a root part which has a length, extends to the implant tip, is intended to be fitted in a jawbone, and has a parabolic outer contour ~~with the implant tip as a vertex~~ which, when placed in a cartesian system of x-y coordinates, with the implant tip positioned at the origin, follows the equation $l_y = K \cdot 4r_x^2$, where
 l_y represents a y coordinate value and r_x represents an x coordinate value, and the constant K results from the equation $K = l_{max} / 4r_{max}^2$;
 - c) an implant neck adjoining the root part, which extends in a coronal direction and is intended to lie inside the gingiva; and
 - d) an outer thread having a pitch and provided on the root part, wherein the root ~~part~~ part has the parabolic outer contour along all of the length of the root part and as far as a theoretical ridge line at which the root part adjoins the implant neck, the root part at the ridge line having a maximum radius extending in a radial direction.
2. (Previously Presented) The dental implant as claimed in claim 1, wherein the outer thread provided on the root part has an outer contour extending parallel to the parabolic outer contour of the root part, and ends at a distance of 1 mm to 4 mm from the ridge line.
- Claim 3 (Cancelled).
4. (Currently Amended) The dental implant as claimed in claim ~~3~~ 1, wherein the maximum radius is between 1 mm and 3 mm.
5. (Currently Amended) The dental implant as claimed in claim 1, wherein
 - a) the outer thread is self-cutting;
 - b) the length of the root part and the pitch of the outer thread, ~~for a maximum radius equal to 2 mm,~~correlate with one another as follows:

Length of root part l (mm)	Pitch p (mm)
6	0.65
8	1
10	1
14	1
16	1

when the maximum radius of the root part at the ridge line is equal to 2mm; and

c) the outer thread ~~extends~~ ends at a distance in a range the y-direction of from 1 mm to 4 mm from the ridge line; ~~and~~

~~d) the distance is proportional to the length of the root part increases.~~

Claim 6 (Cancelled).

7. (Previously Presented) The dental implant as claimed in claim 1, wherein

a) the outer thread includes thread teeth,

b) the thread teeth at the root part extend in a y-direction, and have a height of about 0.3 mm; and

c) the thread teeth, in an x-direction, have a length in the range from 0.25 mm to 0.5 mm.

8. (Currently Amended) The dental implant as claimed in claim 7, wherein

a) the root part at the ridge line has a maximum radius of 2 mm;

~~b) the length of the thread teeth is inversely proportional to the length of the root part;~~
and

~~eb) the outer thread has teeth have~~ the following values relative to the length of the root part:

Length of root part l (mm)	Height of thread teeth h (mm)	Length of thread teeth l_t (mm)
6	0.3	0.4
8	0.3	0.4
10	0.3	0.3
14	0.3	0.25
16	0.3	0.25

9. (Previously Presented) The dental implant as claimed in claim 1, wherein
a) the implant is made of biocompatible material; and
b) the root part has a rough surface which is coated by one chosen from the group consisting of plasma-coating, ceramic-coating, chemical treatment, electrochemical treatment, mechanical treatment, and laser treatment.

10. (Previously Presented) The dental implant as claimed in claim 1, wherein the implant neck is polished and is made of a material selected from the group consisting of titanium, a titanium-based alloy, a biocompatible metal, and a biocompatible metal alloy other than titanium-based alloys.

11. (Previously Presented) The dental implant as claimed in 1, wherein
a) measured in a y-direction, the implant neck has a height in the range from 1 mm to 3 mm; and
b) the implant neck is cylindrical in the coronal direction.

12. (Previously Presented) The dental implant as claimed in claim 4, wherein the maximum radius is from about 1.5 mm to about 2 mm.

13. (Previously Presented) The dental implant as claimed in claim 9, wherein the biocompatible material is selected from the group consisting of titanium-based alloys, metals, metal alloys other than titanium-based alloys, ceramic, and plastic.

14. (Previously Presented) The dental implant as claimed in claim 1, wherein the implant neck is polished and coated with a material selected from the group consisting of ceramic, glass ceramic, hydroxyapatite, plastic, and metal.

15. (Previously Presented) The dental implant as claimed in 1, wherein
a) measured in a y-direction, the implant neck has a height in the range from 1 mm to 3 mm; and
b) the implant neck has a dimension transverse to the coronal direction that changes in the coronal direction.